	Incremental		
	ROD 420	**ROD 430**	**ROD 480**
Incremental signals	⊓⊔TTL	⊓⊔ HTL	∿ 1 V_{PP}[1]
Line counts*	50 100 150 200 250 360 **500** 512 720		–
	1000 1024 1250 1500 1800 **2000 2048 2500 3600 4096 5000**		
Cutoff frequency –3 dB Scanning frequency Edge separation a	– ≤ 300 kHz ≥ 0.39 µs		≥ 180 kHz – –
System accuracy	1/20 of grating period		
Power supply **Current consumption** without load	5 V ± 10 % 120 mA	10 to 30 V 150 mA	5 V ± 10 % 120 mA
Electrical connection*	• **Flange socket** M23, radial and axial • **Cable 1 m/**5 m, with or **without coupling** M23		
Shaft	Solid shaft D = 10 mm		
Mech. permissible speed n	≤ 12000 min^{-1}		
Starting torque	≤ 0.01 Nm (at 20 °C)		
Moment of inertia of rotor	≤ 2.3 · 10^{-6} kgm^2		
Shaft load[2]	Axial 10 N/radial 20 N at shaft end		
Vibration 55 to 2000 Hz **Shock** 6 ms/2 ms	≤ 300 m/s^2 (EN 60068-2-6) ≤ 1000 m/s^2/≤ 2000 m/s^2 (EN 60068-2-27)		
Max. operating temp.[3]	100 °C[4]		
Min. operating temp.	*Flange socket or fixed cable:* –40 °C *For frequent flexing:* –10 °C		
Protection EN 60529	IP 67 at housing; IP 64 at shaft end[5]		
Weight	Approx. 0.3 kg		

Bold: These preferred versions are available on short notice

* Please select when ordering

1) Restricted tolerances: Signal amplitude 0.8 to 1.2 V_{PP}

2) Also see *Mechanical Design and Installation*

3) For the correlation between the operating temperature and the shaft speed or supply voltage, see *General Mechanical Information*

4) 80 °C for ROD 480 with 4096 or 5000 lines

5) IP 66 upon request